

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A high-speed router for transmitting data packets containing header data and useful data between data networks, the router comprising:

a plurality of data-processing processors for parallel data processing of the header data;

a demultiplexer for separating the data packets into header data and useful data; and

a distribution processor for distributing the header data, which has been separated from the useful data, among the data-processing processors at least in part on the basis of a priority specified by the header data and a workload of the data-processing processors.
- 2-4. (Canceled)
5. (Previously Presented) The high-speed router as claimed in claim 1, wherein the distribution processor is configured to distribute the header data among the data-processing processors by means of DMA operations.
6. (Previously Presented) The high-speed router as claimed in claim 1, further comprising a CAM coprocessor having an associative memory for classifying the data packets.
7. (Previously Presented) The high-speed router as claimed in claim 1, further comprising a useful-data memory for buffer-storing the separated useful data.

8. (Previously Presented) The high-speed router as claimed in claim 1, wherein header data and useful data corresponding to a data packet each have a respective identifier associated with the corresponding data packet.
9. (Previously Presented) The high-speed router as claimed in claim 7, further comprising a first multiplexer for compiling header data and useful data into data packets, the first multiplexer being configured to accept useful data from at least one of the useful-data memory and a switching mechanism.
10. (Previously Presented) The high-speed router as claimed in claim 9, further comprising a second multiplexer for compiling the buffer-stored separated useful data in the useful data memory and the header data.
11. (Previously Presented) The high-speed router as claimed in claim 9, further comprising a FIFO memory connected downstream of the first multiplexer for outputting the compiled data packets through the router.
12. (Previously Presented) The high-speed router as claimed in claim 10, wherein the output of the second multiplexer is connected to the switching mechanism.
13. (Previously Presented) The high-speed router as claimed in claim 6, wherein the distribution processor, the data-processing processors and the CAM coprocessor are connected to a common header-data bus.
14. (Previously Presented) The high-speed router as claimed in claim 1, wherein each data-processing processor is connected to a respective dedicated local memory.
15. (Previously Presented) The high-speed router as claimed in claim 13, further comprising a common memory connected to the header-data bus.

16. (Previously Presented) The high-speed router as claimed in claim 13, wherein the CAM coprocessor is connected to the header data bus via FIFO buffer memories.
17. (Previously Presented) The high-speed router as claimed in claim 1, further comprising an input buffer connected upstream of the demultiplexer.
18. (Previously Presented) The high-speed router as claimed in claim 1, configured to transmit data packets between a first data network and a second data network, the first data network comprising a LAN network.
19. (Previously Presented) The high-speed router as claimed in claim 1, configured to transmit data packets between a first data network and a second data network, the second data network comprising the Internet.
20. (Previously Presented) The high-speed router as claimed in claim 1, wherein the distribution processor and the data-processing processors are processors of the same processor type.
21. (Previously Presented) A system comprising
 - a first data network; and
 - a high-speed router as recited in claim 1, the high-speed router being configured to transmit data packets between the first data network and a second data network.